

1    **IN THE CLAIMS**

2           This listing of claims will replace all prior versions, and listings, of claims in the  
3    application:

4  
5    --1. - 29. (Canceled)

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7    30. (New)     A method for analyzing a drug-dosed sample using a Mass Spectrometer,  
8    said method comprising the steps of:

9           ionizing a drug-dosed sample to produce sample ions;

10          wherein said sample comprises several metabolic products;

11          introducing said ions into an analysis region of said mass spectrometer;

12          continuously monitoring said ions;

13          detecting changes to said sample;

14          determining a molecular weight of each species present in said sample to

15    determine an empirical formula of said sample; and

16          identifying each species by comparing said empirical formula to a database of  
17    formulas for known molecules.

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19    31. (New)     A method according to claim 30, wherein said database is updated with  
20    changes that are detected.

1 32. (New) A method according to claim 33, wherein said mass spectrometer is  
2 selected from the group consisting of a Fourier Transform Mass Spectrometer (FTMS), a  
3 Tandem Mass Spectrometer, and an Ion Cyclotron Resonance Mass Spectrometer.

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5 33. (New) A method according to claim 30, wherein said metabolic products are  
6 ionized using Atmospheric Pressure Ionization (API).

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